# CHAPTER 5: RESULTS OF THE SPRING 2001 ADMINISTRATIONS

## Introduction

The legislation establishing CAHSEE called for the first operational form(s) of the exam to be administered in Spring 2001 to 9th graders in the Class of 2004. At the first administration, 9th graders could volunteer, but were not required, to take both portions of the exam. Students who did not pass the exam in that administration would be required to take the exam as 10th graders in Spring 2002.

In Fall 2000, the Superintendent set testing dates of March 7, 2001 for the English-language arts (ELA) portion of the CAHSEE and March 13 for the Math portion. Additional testing dates were set in May (May 17 for ELA and May 24 for Math) for year-round schools that were not in session during the March testing dates. Since participation was to be voluntary, no provision was made for makeup sessions for students who were absent on the designated testing dates.

At the December 2000 meeting of the State Board of Education (SBE), the Acting Secretary of Education announced that urgent legislation was being introduced in the state legislature that would change the nature of the first administration. Specifically, the March 2001 administration would be changed to a practice test, introducing 9th graders in the Class of 2004 to the nature and format of the examination, but not classifying any students as either passing or failing the exam. The first operational administration would be in Spring 2002, when all 10th graders in the Class of 2004 would be required to participate. The change was motivated by two concerns. First, it appeared that many students do not complete courses that cover the content of the exam until the 10th grade. Making the test operational for 9th graders could raise significant questions about inequity in opportunity to learn the material covered by the test.

The second reason for the change was that census testing of 10th graders in 2002 would provide important normative information. Under the original plan, no single administration would include a representative sample of students. The Spring 2001 administration would be voluntary and the Spring 2002 administration would partially or completely exclude students who had previously passed one or both parts of the exam, respectively. Before operational results could be reported, the Board had to determine the minimum score levels required for passing each of the two parts. Minimum passing scores based on performance results on previous administrations of a test are often referred to as “performance standards,” in contrast to content standards, which describe the material covered by the test. In setting performance standards, it is common for the governing body to use normative information (specifically the proportion who pass the exam) to check on the reasonableness of performance standards recommended by panels of content experts.

Following the December 2000 Board meeting, Senate Bill 84 (SB 84) was introduced to enact changes with respect to the initial administration of the CAHSEE. SB 84 was introduced in the state Senate on January 11, 2001 as an urgency measure, meaning that it would take effect immediately. Otherwise the bill would not become effective until well after the planned March administration of the test. The Senate Education Committee approved the

bill with amendments on February 1, 2001 and the full Senate passed it on February 20, 2001. In the Assembly, the bill was amended to return it to its original form, deleting the Senate amendments that included a provision to defer the requirement until the Class of 2005. On March 1, 2001, the Assembly passed the bill in its original form. Assembly amendments restored the urgency provision, which had been deleted in the Senate. As an urgency measure, the bill required approval by 60% of the members of each house. When the Senate voted on the revised (original) measure on March 1, 2001, the bill failed to receive the required 60% majority. A second vote was taken on March 5, 2001, but again the measure failed to obtain the required majority. Note that the final vote to defeat SB 84 occurred just 2 days before the administration of the ELA portion of the exam, scheduled for March 7. Fortunately, most 9$^{th}$ graders were already signed up to take the exam, but it is likely that many would have received more extensive preparation had it been known earlier that the exam would count. In reality, however, students in the Class of 2004 were not negatively impacted by the failure of the legislation. They now had one more chance to pass the exam, which they would not have had if SB 84 had gone through.

In this chapter we present our analyses of pupil performance on the 2001 CAHSEE, as required in the legislative mandate for the independent evaluation. Since scores have just recently been returned to schools and students, there has not yet been an opportunity to consider the effects of the CAHSEE testing on student outcomes. By the time of our February 2004 report there will be ample opportunity to analyze and report dropout and retention rates and changes in expectations for graduation and college attendance.

## Student Result Data Files

The analyses reported here are based on student result data supplied by AIR, the contractor for test development and administration. AIR had made processing and reporting plans based on the assumption that the 2001 administration would be a practice test only. When this proved not to be the case, heroic efforts were launched to conduct the standard setting panels, get a decision from the State Board of Education on the final passing standards, and reprogram all of the reporting of student results to include pass/fail information and eliminate some item-specific information that had been planned. As a result of these changes, it was not possible to report scores within 6 weeks as specified in the original legislation.

When we received the final data files, we discovered two problems that had to be resolved before we could complete our analyses. Neither of these problems affected the scores returned to individual students in any way, but they did create problems for analyses we were required to perform.

The first problem concerned efforts to merge each student's results on the ELA test with their results on the Mathematics test. There is no universal student identifier that could be used to match results on the two tests. Some schools supplied a local student identifier, but coding or scanning errors in this field led to a number of unmatched cases. In other instances, the only information that could be used to match ELA and math results was the name and birth date that the students themselves coded on each of their answer sheets. We examined all of the cases where a student was recorded as having taken one test but not the other. We

needed to know how many students passed both parts of the test, thus fulfilling the CAHSEE requirement. We discovered nearly 20,000 cases where previously unmatched test results could be matched up with a reasonable degree of certainty. For statistical reporting, we could tolerate a few cases where two different students were inadvertently matched. These were more than offset by instances (about 4–5% of the remaining unmatched test results) where results for the same student were not successfully matched due to coding discrepancies in key identifiers.

The second data problem was the coding of language fluency. An error in the initial instructions for precoding student information left off the 3rd language fluency category. This category, Redesignated Fluent English Proficiency (RFEP), indicated that a student who had been an English learner was now proficient in English. While this error was soon corrected in amended instructions, some districts overlooked the amended instructions or had coded the student information before receiving the amendment. As a result of this error a significant number of English learners were assigned Code 3 and treated as if they were RFEP students. This led to an undercount of the number of English learners by about 17,000 (relative to reported results from the 2001 STAR administration a few weeks later. It also meant that the performance of redesignated students was understated, since about 17,000 English learners, who tended to perform less well, were inadvertently mixed in with the RFEP students.

AIR is working with the districts to correct language fluency codes. Since we are required to report results separately for English learners, we proceeded with a provisional correction to the data file. We used school-by-school counts from STAR to identify instances where EL students were significantly undercounted and then looked at demographic categories (most notably length of time in the district) that were related to the likelihood that a student had not yet been redesignated as proficient in English. The 16,896 students whom we changed from "redesignated" to English learners had average test scores that were very similar to those of the other English learners and were significantly different from the rest of the "redesignated" students. The average ELA scale score for the students we recoded was 334.8 compared to means of 334.4 for the students originally coded as English learners and 359.2 for RFEP students who were not recoded. Passing rates were 31.3% for the recoded students, 29.5% for students originally coded as English learners, and 61.6% for RFEP students who were not recoded. Overall, this change raised the passing rates for RFEP students from 51.8% before recoding to 61.6%, a rate close to the overall passing rate.

The data problems that we encountered lead to two suggestions for future administrations of the test. First, districts might be required to use and check individual student identifiers so that results from the answer sheets for the two tests can be matched unambiguously. The matching problem could otherwise be even more significant in 2002 since the ELA test will be divided and administered to each student over a 2-day period. The new test development contractor, ETS, plans to use a single answer sheet for all three days of testing. This will essentially eliminate matching problems, but it may lead to test security issues because procedures will be needed to ensure that students are not able to change answers on previous sections during the second and third day of testing.

The second recommendation is that a data correction cycle should be an essential part of the CAHSEE processing. Rosters of students taking the exam could be returned to schools

for checking as soon as the initial scanning of answer sheets is completed. There would be plenty of time to receive and process corrections to identifiers and key demographic fields (e.g., language fluency) while the essays are being hand-scored.

## Who Passed?

Once the data file was received and corrected, we conducted a number of analyses to see who passed each of the two parts of the exam. A major charge for our evaluation is to report passing rates for specific demographic groups, including all students, economically disadvantaged students, special education students or students with disabilities (characterized as "exceptional needs students" in the legislation), and EL students. Table 5.1 shows the passing rates for each of these groups, further broken down by gender and race. We also show the (estimated) number of examinees in each group passing both parts of the exam and fulfilling the CAHSEE requirement.

TABLE 5.1 Passing Rates by Demographic Group

| | | Number Taking the Exam | | | Percent Passing | | |
|---|---|---|---|---|---|---|---|
| Group | Sex | ELA | Math | Both* | ELA | Math | Both* |
| All Students | All | 369,387 | 364,664 | 344,650 | 64.1 | 44.4 | 42.2 |
| | Female | 180,680 | 178,370 | 169,498 | 71.0 | 43.1 | 42.4 |
| | Male | 188,239 | 185,818 | 174,985 | 57.5 | 45.8 | 42.1 |
| Asian | All | 31,242 | 31,435 | 30,515 | 76.3 | 70.2 | 64.5 |
| | Female | 15,067 | 15,170 | 14,776 | 81.1 | 69.8 | 65.9 |
| | Male | 16,151 | 16238 | 15,726 | 71.8 | 70.7 | 63.1 |
| African American | All | 29,947 | 29,442 | 27,197 | 49.6 | 24.3 | 22.8 |
| | Female | 15,039 | 14,815 | 13,789 | 59.4 | 24.5 | 24.1 |
| | Male | 14,857 | 14582 | 13,392 | 39.7 | 24.2 | 21.5 |
| Hispanic | All | 150,369 | 148,176 | 139,036 | 47.9 | 25.2 | 22.8 |
| | Female | 73,719 | 72,593 | 68,455 | 55.1 | 23.3 | 22.4 |
| | Male | 76,525 | 75,468 | 70,536 | 41.0 | 27.0 | 23.3 |
| Caucasian | All | 136,108 | 133,874 | 128,004 | 81.5 | 63.6 | 61.4 |
| | Female | 66,620 | 65,602 | 62,975 | 88.0 | 62.3 | 61.8 |
| | Male | 69,414 | 68,203 | 64,996 | 75.4 | 64.8 | 61.1 |
| Economically Disadvantaged | All | 118,680 | 116,898 | 109,860 | 45.4 | 25.7 | 22.7 |
| | Female | 56,777 | 55,963 | 52,891 | 52.7 | 23.9 | 22.5 |
| | Male | 61,848 | 60,862 | 56,952 | 38.7 | 27.3 | 22.8 |
| English learners* | All | 64,962 | 64,746 | 60,489 | 29.9 | 16.6 | 11.9 |
| | Female | 30,470 | 30,352 | 28,488 | 35.5 | 14.4 | 11.3 |
| | Male | 34,442 | 34,334 | 31,981 | 24.9 | 18.6 | 12.3 |
| Redesignated Fluent English Proficient* | All | 33,100 | 32,124 | 31,330 | 61.6 | 40.6 | 37.6 |
| | Female | 16,896 | 16,413 | 16,032 | 67.3 | 38.3 | 36.9 |
| | Male | 16,200 | 15,708 | 15,297 | 55.6 | 43.0 | 38.3 |
| Students with Disabilities | All | 35,957 | 35,177 | 32,334 | 22.8 | 12.8 | 10.3 |
| | Female | 12,181 | 11,974 | 11,050 | 28.0 | 9.9 | 9.3 |
| | Male | 23,734 | 23,150 | 21,271 | 20.1 | 14.3 | 10.5 |

* Note: Results reflect statistical corrections to the counts by language fluency categories.

The percentage of students passing both of the exams shown here, 42%, is significantly higher than the 34% passing rate reported previously by AIR. Two factors account for this difference. First, the rates reported above reflect only those students who attempted *both* tests. The previous rate was a percentage of those students who attempted *either* of the tests,

a significantly larger base. Second, in matching about 20,000 additional ELA and Math results, we increased the number passing both tests. The initial files showed these students twice, once attempting only the ELA test and once attempting only the mathematics test. Consequently, none of these students were counted as passing both parts when, in fact, many of them did.

Overall, 64 percent of the students who took the ELA test in either the March or May administration passed. For Math, the passing rate was 44 percent. Most of the students who passed the mathematics test and also took the ELA test passed both parts since 42 percent of the students taking both parts passed. The combined passing rates were similar for males and females, although a noticeably higher percentage of females passed the ELA test (70 compared to 58 percent) while a slightly higher percentage of males passed the mathematics test (45 versus 41 percent). The overall passing rate was higher for Asian and White students, over 60 percent. The combined passing rate for African American and Hispanic students and also for economically disadvantaged students (those eligible for free or reduced lunches) was just over 20 percent. The combined passing rate for English learners and students with disabilities was barely over 10 percent.

We also analyzed results separately for students who had been English learners but are now redesignated as proficient in English. A total of 61.6% of the redesignated students (compared to 29.9% of the EL students) passed the ELA test. For Math, the passing rate was 40.6% compared to 16.6% for EL students. The combined passing rate was 37.6 compared to 11.9 for EL students. The implication of these differences is that the passing rates for English learners will be likely to increase dramatically if they can reach proficiency in English. Of course, other learning will also be required to bring passing rates closer to 100%.

## Who Has Completed the CAHSEE Graduation Requirement?

In addition to comparisons of passing rates for various demographic groups who took the exam, another important consideration is an assessment of how many students in the Class of 2004 have completed the graduation requirement to pass both parts of the CAHSEE to date. Table 5.2 lists the total enrollments of 9$^{th}$ graders, and the number and percentage who have already passed both parts of the exam. Calculations of enrollment and determination of the number who passed both parts of the exam are subject to the same constraints identified above. The results reveal that 29.9% of all students in the Class of 2004 have successfully completed the CAHSEE requirement. In other words, the remaining 70.1% of the Class of 2004 must take one or both tests in the spring of 2002, some for the first time and some for the second time. Completion rates are highest among Asian students. Only 8.1% of EL students and 6.5% of SD students have completed this graduation requirement.

TABLE 5.2 CAHSEE Completion Rates by 9th Grade Enrollment

| Group | Enrollment** | Number Taking Both Tests* | Percentage Taking Both* | Number Passing Both * | Percentage of 9th Graders Passing Both * |
|---|---|---|---|---|---|
| All | 485,910 | 344,650 | 70.9 | 145,442 | 29.9 |
| Female | 234,911 | 169,498 | 72.2 | 71,867 | 30.6 |
| Male | 250,999 | 174,985 | 69.7 | 73,669 | 29.4 |
| Asian | 38,823 | 30,515 | 78.6 | 19,682 | 50.7 |
| Female | 18,551 | 14,776 | 79.7 | 9,737 | 52.5 |
| Male | 20,272 | 15,726 | 77.6 | 9,923 | 48.9 |
| African Amer. | 42,196 | 27,197 | 64.5 | 6,201 | 14.7 |
| Female | 20,825 | 13,789 | 66.2 | 3,323 | 16.0 |
| Male | 21,371 | 13,392 | 62.7 | 2,879 | 13.5 |
| Hispanic | 201,966 | 139,036 | 68.8 | 31,700 | 15.7 |
| Female | 97,408 | 68,455 | 70.3 | 15,334 | 15.7 |
| Male | 104,558 | 70,536 | 67.5 | 16,435 | 15.7 |
| White | 180,253 | 128,004 | 71.0 | 78,594 | 43.6 |
| Female | 87,127 | 62,975 | 72.3 | 38,919 | 44.7 |
| Male | 93,126 | 64,996 | 69.8 | 39,713 | 42.6 |
| ED | Not available | 109,860 | N/A | 24,938 | N/A |
| EL** | 88,488 | 60,489 | 68.4 | 7,170 | 8.1 |
| SD | 51,070 | 32,334 | 63.3 | 3,330 | 6.5 |

*Note:* ED = Economically Disadvantaged, EL = English learner, SD = Students with Disabilities.

* Based on attempts to match ELA and Math records originally shown as separate. Note that here the number passing both parts was divided by total enrolled students, not just those taking the exam, resulting in smaller percentages in comparison to those in Table 5.1

**Based on statistical corrections to the counts by language fluency categories

## Multiple-Choice versus Essays

The ELA test combined multiple-choice and essay questions. One issue that was debated extensively by the HSEE Standards Panel was how well students should have to perform on each part of the ELA test in order to be considered proficient. In the end, separate passing levels were not established for each question type or for different content areas. Instead, the panel established a compensatory model, where exceptional performance in one content area or on one type of question would compensate for lower performance in other content areas or on other types of questions.

Table 5.3 below shows the number of students (from the March administration) with each possible total essay score (the sum of the scores on the two essays) and the percent of these students who received a passing score on the ELA test. A very small number of students (242) passed the ELA test without getting any credit for either of the essays. Of the 226,022 students who passed the ELA test in March, only 1,856 of them (0.8%) had essay scores lower than 3.0, (out of a possible maximum of 8 points). Students received a score of 3.0 or greater only if two of the four judges rated one or the other of their essays at score level two or higher. In fact, only 6,607 of the student who passed (2.9%) had a total essay score lower than 4.5. Thus 97.1% of the students who passed scored 4.5 or higher, meaning that at least one of their essays received a score of 2.5 or better. Although there are no explicit passing scores for each essay, 2.5 provides a reasonable lower boundary for “acceptable” essays. Less than 3% of the students who passed the ELA failed to write an essay that scored at least this high.

TABLE 5.3 Percent Passing the ELA Test by Total Essay Score

| Total Essay Score | Number of Students | % of Students | Number Passing ELA | % Passing ELA |
|---|---|---|---|---|
| 0.0 | 15,920 | 4.5% | 242 | 1.5% |
| 1.0 | 5,968 | 1.7% | 104 | 1.7% |
| 1.5 | 3,100 | 0.9% | 68 | 2.2% |
| 2.0 | 12,096 | 3.5% | 753 | 6.2% |
| 2.5 | 7,494 | 2.1% | 689 | 9.2% |
| 3.0 | 14,693 | 4.2% | 2,369 | 16.1% |
| 3.5 | 11,494 | 3.3% | 2,382 | 20.7% |
| 4.0 | 24,772 | 7.1% | 7,763 | 31.3% |
| 4.5 | 26,077 | 7.5% | 12,410 | 47.6% |
| 5.0 | 39,320 | 11.2% | 25,497 | 64.8% |
| 5.5 | 43,508 | 12.4% | 34,629 | 79.6% |
| 6.0 | 65,278 | 18.7% | 59,761 | 91.5% |
| 6.5 | 37,004 | 10.6% | 36,214 | 97.9% |
| 7.0 | 24,425 | 7.0% | 24,357 | 99.7% |
| 7.5 | 12,253 | 3.5% | 12,248 | 100.0% |
| 8.0 | 6,536 | 1.9% | 6,536 | 100.0% |
| Total | 349,938 | 100.0% | 226,022 | 64.6% |

Table 5.4 shows a similar breakout of passing rates for different number-correct scores on the multiple-choice questions. An overall score of 54 on the weighted composite of scores from the multiple-choice and essay sections was required for passing. The essay score translated to a maximum of 27 of the 90 possible total score points. Students had to answer at least 36 multiple-choice questions correctly to achieve a weighted score of 27 on the multiple-choice portion of the ELA test. In fact, no one passed the exam without answering at least 38 of the 82 multiple-choice questions correctly. Students who answered 71 questions correctly received at least 54 points from the multiple-choice portion and so were guaranteed a passing total score. As noted above, nearly all of these students also had high scores on the essays.

TABLE 5.4 Number and Percent of Students Passing the ELA test by Total Multiple-Choice Score

| Multiple-Choice Total Score | Number of Students | % of Students | Number of Students Passing | % Passing for this MC Score |
|---|---|---|---|---|
| 0–37 | 66,310 | 18.9% | 0 | 0.0% |
| 38–40 | 13,269 | 3.8% | 27 | 0.2% |
| 41–45 | 24,875 | 7.1% | 2,424 | 9.7% |
| 46–50 | 30,156 | 8.6% | 16,639 | 55.2% |
| 51–55 | 35,126 | 10.0% | 29,323 | 83.5% |
| 56–60 | 40,839 | 11.7% | 38,972 | 96.2% |
| 61–70 | 88,495 | 25.3% | 87,769 | 99.2% |
| 71–82 | 50,868 | 14.5% | 50,868 | 100.0% |
| TOTAL | 349,938 | 100.0% | 226,022 | 64.6% |

For mathematics, we examined passing rates for different course completion patterns. Information was recorded on the student answer sheets as to the grade (from 7 to 12) in which specific mathematics courses were taken. Unfortunately, there was no specific way to indicate that a given course was not taken. For 106,987 students, there were no marks for any

course in the preliminary data files. The course status of these students was set to missing. Course status was set to invalid for a few students who indicated courses taken in grades they had not reached. Otherwise, students were classified on the basis of whether they had taken or were taking Algebra 1. Students who took Algebra 1 prior to the 9th grade were further classified according to whether they were or were not currently enrolled in Geometry. Students who had not taken Algebra 1 but had taken or were enrolled in an Integrated Math course were coded separately. Table 5.5 shows the number of students and passing rates for the CAHSEE math exam for each math course status category. Not surprisingly, students who had completed Algebra 1 and were enrolled in Geometry had a very high passing rate—above 90%. Students who had not taken and were not enrolled in Algebra 1 had very low passing rates—below 20%.

TABLE 5.5 CAHSEE Math Passing Rate by Math Courses Taken

| Math Course Status | Number of Students | % Passing Mathematics |
|---|---|---|
| Completed Algebra and Enrolled in Geometry | 35,923 | 90.29 |
| Completed Algebra, not Enrolled in Geometry | 10,819 | 60.74 |
| Completed or Enrolled in Integrated Math 1 | 11,283 | 52.81 |
| Currently Enrolled in Algebra 1 | 118,097 | 48.77 |
| Algebra 1 not Taken | 61,537 | 18.23 |
| Course Information Missing | 106,987 | 37.80 |
| Invalid Course Information | 1,264 | 16.67 |

## School Level Passing Rates

A key question is the extent of variation in passing rates by school. To the extent that relatively few students from a particular school pass the exam, there is reason to believe that somewhere along the way these students have not had the opportunity to learn either the material covered by the test or, even more likely, to learn key prerequisite skills taught at lower grades. Conversely, if most students in a school do pass the exam, there is good reason to believe that students at that school did have adequate opportunity to learn the required material. Table 5.6 and Table 5.7 below show the number of schools where very few (less than 10%) of the students tested received passing scores through the number of schools where nearly all students (at least 90%) of the students passed. The edited data files included 1,611 different schools that participated in the 2001 administration. In 350 of the schools, fewer than 10 students were tested. For these schools very low or high passing rates are not surprising. Most of the schools where larger numbers of students were tested had passing rates between 25% and 75%, consistent with the overall passing rates for the state as a whole. Schools where at least 100 students were tested and the passing rate was below 25% may deserve special attention.

TABLE 5.6 Number and Percent of Schools with Low and High Passing Rates By Number of Students Tested—ELA

| ELA Passing Rate for the School | Number of Students Tested | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1–9 | | 10–99 | | 100–499 | | 500+ | | All Schools | |
| | No. of Schools | % of Schools | No. of Schools | % of Schools | No. of Schools | % of Schools | No. of Schools | % of Schools | No. of Schools | % of Schools |
| Very Low (< 10%) | 132 | 38 | 63 | 13 | 6 | 1 | 2 | 1 | 203 | 13 |
| Low (10–24%) | 39 | 11 | 100 | 21 | 20 | 4 | 16 | 5 | 175 | 11 |
| Moderate (25–74%) | 132 | 38 | 230 | 49 | 266 | 59 | 244 | 72 | 872 | 54 |
| High (75–89%) | 19 | 5 | 57 | 12 | 120 | 27 | 70 | 21 | 266 | 17 |
| Very High (> 89%) | 28 | 8 | 22 | 5 | 37 | 8 | 8 | 2 | 95 | 6 |
| Total | 350 | 100 | 472 | 100 | 449 | 100 | 340 | 100 | 1611 | 100 |

Note: For schools where 500 or more students were tested, the passing rates ranged from 6.7% to 98.0%; for schools where 101 to 499 students were tested, the passing rates ranged from 0.0% to 98.4%. Column percents may not add to 100 due to rounding.

TABLE 5.7 Number and Percent of Schools with Low and High Passing Rates By Number of Students Tested —Mathematics

| Mathematics Passing Rate for the School | Number of Students Tested | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1–9 | | 10–99 | | 100–499 | | 500+ | | All Schools | |
| | No. of Schools | % of Schools | No. of Schools | % of Schools | No. of Schools | % of Schools | No. of Schools | % of Schools | No. of Schools | % of Schools |
| Very Low (< 10%) | 214 | 61 | 210 | 44 | 30 | 7 | 10 | 3 | 464 | 29 |
| Low (10–24%) | 44 | 13 | 85 | 18 | 54 | 12 | 67 | 20 | 250 | 16 |
| Moderate (25–74%) | 74 | 21 | 158 | 33 | 326 | 73 | 251 | 74 | 809 | 50 |
| High (75–89%) | 7 | 2 | 13 | 3 | 31 | 7 | 11 | 3 | 62 | 4 |
| Very High (> 89%) | 11 | 3 | 6 | 1 | 8 | 2 | 1 | 0 | 26 | 2 |
| Total | 350 | 100 | 472 | 100 | 449 | 100 | 340 | 100 | 1611 | 100 |

Note: For schools where 500 or more students were tested, the passing rates ranged from 2.8% to 97.7%; for schools where 101 to 499 students were tested, the passing rates ranged from 1.2% to 94.7%. Column percents may not add to 100 due to rounding.

Note that of the 340 schools where 500 or more students were tested, 18 of them (6%) had passing rates below 25% on the ELA test and 77 of them (23%) had passing rates below 25% on the Mathematics test. Schools such as these will merit particular attention if the low passing rates persist in future administrations. We plan to monitor passing rates by school in future CAHSEE administrations.

## Test Score Accuracy

Another key question is how accurately students were classified as having achieved or failed to achieve the passing standard. In our Year 2 report (Wise et al., 2001), we described the statistical methodology we used to estimate classification error rates. Key results from those analyses are summarized briefly here.

If a student took two parallel (equivalent content and equally difficult) forms of a test, his or her scores on the two forms would not be exactly the same. The proportion of questions for which students know the correct answer will vary slightly across different samples of questions and further, they will have varying luck in guessing the correct answer to multiple-

choice questions for which they do not know (or cannot figure) the correct answer. Usually, a standard error of measurement is computed to summarize how much scores might vary across parallel forms.

In the present context, we are most concerned with instances where score differences across test forms would lead to the student's sometimes passing and sometimes failing the test. Note that students who are exactly at the minimum level of competency for passing are likely to pass half (with positive measurement error) and fail the other half of the time (when measurement error is negative) resulting in a classification error rate of 50%. In our analyses, we identified the point at which a student whose true achievement was below the passing standard was estimated to have at least a 10% chance of passing in any single testing session. Similarly, we identified the point at which a student whose true achievement level was above the passing point would still have a 10% chance of failing in a single testing session. The range between these two points identifies a "zone of uncertainty" where students are close enough to the passing level that the outcome of a single testing session is somewhat uncertain. To the extent that test scores are highly reliable, this zone will be very narrow and relatively few students will fall within this zone.

Tables 5.8 and 5.9 show the zones of uncertainty thus defined for the CAHSEE ELA and mathematics test forms used in the March and May 2001 administrations. These tables show the number and percentage of students at each of four levels, ranging from well below the minimum to well above the minimum. For each level, the percentage of students who might pass the test on a single administration is estimated. For the first two levels, the student's "true" achievement is below the minimum so passing the test would result in a classification error. For the two upper levels, true achievement is above the minimum so not passing would result in a classification error. For each level, the percentage of students at that level is multiplied by the percentage of classification errors to estimate the percentage of all students who would be misclassified.

Overall, the classification error rates were estimated to be 7.1% and 7.4% for the ELA test forms and 6.5% and 6.2% for the Mathematics test forms. More importantly, almost all of the errors were estimated for students near the minimum passing levels. This zone of uncertainty was relatively narrow, within 8 points on the percent correct scale or about 10 points on the reporting scale of the minimum. Fewer than 1% of all students (about 0.8%) were estimated to have classification errors outside this zone.

TABLE 5.8 Estimated Classification Error Rates for the March 2001 Forms

| True Level of Achievement | Score Range | | %. in Range | Estimated % Passing | Total % Incorrectly Classified |
|---|---|---|---|---|---|
| | % of Total Points | Scale Scores | | | |
| *English-language arts* | | | | | |
| 1. Well Below Minimum | 00.0-51.8 | 250-336 | 24.6 | 1.4 | 0.3 |
| 2. Slightly Below Minimum | 51.9-59.9 | 337-349 | 11.0 | 32.5 | 3.6 |
| 3. Slightly Above Minimum | 60.0-66.1 | 350-361 | 11.4 | 76.1 | 2.7 |
| 4. Well Above Minimum | 66.2-100 | 362-450 | 52.9 | 99.0 | 0.5 |
| Range of Uncertainty | 51.9-66.1 | 337-361 | 22.4 | | 6.3 |
| Outside this Range | | | 77.6 | | 0.8 |
| TOTAL | | | 100.0 | | **7.1** |
| *Mathematics* | | | | | |
| 1. Well Below Minimum | 00.0-47.6 | 250-338 | 43.1 | 1.1 | 0.5 |
| 2. Slightly Below Minimum | 47.7-54.9 | 339-349 | 10.4 | 30.4 | 3.2 |
| 3. Slightly Above Minimum | 55.0-60.7 | 350-359 | 9.8 | 74.9 | 2.5 |
| 4. Well Above Minimum | 60.8-100 | 360-450 | 36.7 | 99.1 | 0.3 |
| Range of Uncertainty | 47.7-60.7 | 339-359 | 20.2 | | 5.7 |
| Outside this Range | | | 79.8 | | 0.8 |
| TOTAL | | | 100.0 | | **6.5** |

TABLE 5.9 Estimated Classification Error Rates for the May 2001 Forms

| True Level of Achievement | Score Range | | %. in Range | Estimated % Passing | Total % Incorrectly Classified |
|---|---|---|---|---|---|
| | % of Total Points | Scale Scores | | | |
| *English-language arts* | | | | | |
| 1. Well Below Minimum | 00.0-52.0 | 250-336 | 33.9 | 1.2 | 0.4 |
| 2. Slightly Below Minimum | 52.1-59.9 | 337-349 | 12.2 | 30.6 | 3.7 |
| 3. Slightly Above Minimum | 60.0-66.0 | 350-361 | 11.5 | 75.4 | 2.8 |
| 4. Well Above Minimum | 66.1-100 | 362-450 | 42.4 | 98.9 | 0.5 |
| Range of Uncertainty | 52.1-66.0 | 338-361 | 23.7 | | 6.5 |
| Outside this Range | | | 76.3 | | 0.9 |
| TOTAL | | | 100.0 | | **7.4** |
| *Mathematics* | | | | | |
| 1. Well Below Minimum | 00.0-49.9 | 250-337 | 48.4 | 0.8 | 0.4 |
| 2. Slightly Below Minimum | 50.0-57.4 | 338-349 | 12.1 | 29.0 | 3.5 |
| 3. Slightly Above Minimum | 57.5-63.2 | 350-363 | 7.3 | 74.0 | 1.9 |
| 4. Well Above Minimum | 63.3-100 | 364-450 | 32.2 | 98.9 | 0.4 |
| Range of Uncertainty | 50.0-63.2 | 338-363 | 19.4 | | 5.4 |
| Outside this Range | | | 80.6 | | 0.8 |
| TOTAL | | | 100.0 | | **6.2** |

At its December 2000 meeting, the SBE approved revised test specifications that included fewer questions for each of the two exams. Both tests were shortened relative to the original specifications, from about 100 multiple-choice questions down to 80 to 82 questions.

The result was inevitably some loss in the accuracy of the test scores and in the precision with which students are classified as above or below the passing standard, because accuracy necessarily increases with test length, other things being equal. The accuracy of the ELA test is further affected by the relatively large weight given to the two essay questions in comparison to the larger number of multiple-choice questions. Nonetheless, both tests appear to be performing reasonably well. Estimated classification error rates are modest. Errors occur almost exclusively where true achievement is quite near the passing standard. The consequences of passing a modest number of students who are only slightly below the standard while requiring a modest number who are barely above the standard to retest would not appear to be serious.

## Summary

Results from the 2001 CAHSEE administration are summarized above. Overall, 64% of the students taking the ELA test passed and 44% of the students taking the mathematics test passed. We estimate that 42% of the students taking both exams passed both, although there is a small amount of uncertainty about this number due to problems in matching students' ELA and mathematics results. Passing rates were considerably lower for economically disadvantaged students (22.7% overall) and particularly for English learners and students with disabilities (11.9% and 10.3% respectively passing both parts). Overall we estimate that about 30% of the Class of 2004 took and passed both parts of the CAHSEE. Only about 6% to 8% of the EL and SD students have completed the requirements as fewer of these students took the exam and fewer of those who took it passed.

Two factors were significantly related to the passing rates. For the ELA test, students who had been English learners but were reclassified as proficient in English passed the exam at relatively high rates in comparison to students classified as English learners. Again, there is a small amount of uncertainty about these estimates due to data coding problems that were being corrected by AIR and CDE. For the mathematics test, completing Algebra I was significantly related to the passing rates. We also examined the consistency between scores on the essay and multiple-choice portions of the ELA test and found that relatively few students passed who did not have moderate to high scores on both parts.

Our analyses of test score accuracy indicated that a modest number of students were too near the cutoff to classify accurately. For students significantly below or above the cutoff, classification was quite accurate. The zone of uncertainty was modest for the ELA test and much narrower for the mathematics test.